Technical training.
Product information.

G12 Rear Seat Entertainment

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BMW Service

General information

Symbols used

The following symbol is used in this document to facilitate better comprehension or to draw attention to very important information:

Contains important safety information and information that needs to be observed strictly in order to guarantee the smooth operation of the system.

Information status and national-market versions

BMW Group vehicles meet the requirements of the highest safety and quality standards. Changes in requirements for environmental protection, customer benefits and design render necessary continuous development of systems and components. Consequently, there may be discrepancies between the contents of this document and the vehicles available in the training course.

This document basically relates to the European version of left hand drive vehicles. Some operating elements or components are arranged differently in right-hand drive vehicles than shown in the graphics in this document. Further differences may arise as the result of the equipment specification in specific markets or countries.

Additional sources of information

Further information on the individual topics can be found in the following:

- Owner's Handbook
- Integrated Service Technical Application.

Contact: conceptinfo@bmw.de

The information contained in this document forms an integral part of the technical training of the BMW Group and is intended for the trainer and participants in the seminar. Refer to the latest relevant information systems of the BMW Group for any changes/additions to the technical data.

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G12 Rear Seat Entertainment

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G12 Rear Seat Entertainment

1. Introduction

1.1. History

There were a number of innovations in terms of equipment and operation in the rear seat entertainment system for the F01/F02. 2 different equipment specifications were available: The Rear Seat Entertainment (SA 6FG) and the Rear Seat Entertainment Professional (SA 6FH).

Two folding displays with a resolution of 800 x 480 pixels and a screen size of 8“ (SA 6FG) or 9.2“ (SA 6FH) with integrated infrared transmitter unit for wireless headphones were used in a BMW vehicle for the first time.

The infrared transmitter unit for the headphones was replaced by 2 radio interfaces for connection of 2 wireless headphones (KLEER® standard) with the F01/F02 LCI in July 2012.

The system is controlled by a radio remote control or, in the case of the High system, via the rear-compartment controller FCON.

RSE control units were integrated in the MOST bus for both systems.

Innovations for the F01/F02 included the following:

- Independent operation of driver's and passenger's sides with rear seat entertainment system.
- Navigation in 2D and 3D with navigation transfer of destination input to the driver. Route guidance started after acceptance of the suggestion by the driver.
- BMW Online and BMW Internet implemented as optional equipment in the RSE system.
- Use of the Gracenote© database with data from the Head Unit High.
- USB interface in the control unit of the RSE system available for customer use with audio and video playback from USB stick.
- A zoning concept has been implemented since 07/2012. The concept provides a clear structure for media operation in the vehicle. There are sources which can be accessed only at the front in the head unit, sources which can be accessed only in the rear in the RSE and sources that can accessed by both operating units (common media server, broadcast, etc.).

G12 Rear Seat Entertainment

1. Introduction

1.2. Rear seat entertainment system in the G12

1.2.1. Offer

With the introduction of the G12, only **one rear seat entertainment system** is now offered, the **Rear Seat Entertainment** (SA 6FR).

Rear seat entertainment system in the G12

This optional equipment package includes 2 angle-adjustable 10" rear compartment displays which can be operated independently of each other. The RSE package also contains for the first time a Touch Command tablet for operation of the system and a Blu-Ray® drive in the RSE control unit.

Many other details such as connection to the vehicle electrical system as well as the components and interfaces of the RSE system are described in Chapter 2.

G12 Rear Seat Entertainment

1. Introduction

1.3. Variants

1.3.1. Which optional equipment is available?

- The audio control for the rear passenger compartment (SA 6FK) is planned as a simple audio remote control for the rear passenger compartment which controls the head unit in the front of the vehicle. It is intended for a number of specific countries if the customer there does not want a rear seat entertainment system. However, since the radio standard is not compatible with the new RDCi, this optional equipment will be offered only for markets where RDCi is not available. This is because the systems could interfere with each other. It had not yet been decided on the editorial closing date whether this optional equipment will already be available for the launch of the G12.
- When a customer orders the **BMW Touch Command Tablet (SA 6U9)** (as part of the **ZLU-Luxury Rear Seating Package**), he receives a tablet with 7" display with separate holder and charging function (snap-in adapter) in the center armrest of the G12. The Touch Command is also used for operation of the head unit at the front and for remote control of the rear seat entertainment system via the head unit (Wi-Fi®Direct) connection.
- The optional equipment **Rear Seat Entertainment (SA 6FR)** comprises the rear seat entertainment system with two 10" display screens, RSE control unit and already includes the optional equipment **7" Touch Command Tablet (SA 6U9)**.
- The **Rear Executive Lounge Seating Package (ZRE) is a complete package (available only on the 750i G12)** and includes **Rear Executive Lounge Seating (SA 7GZ)** . It also includes both the optional equipment **Electric Reclining Seat and Footrest (SA 4F4)** as well as the **Executive Lounge Rear Center Console (SA 4F5)**. The above-mentioned optional equipment **Rear Seat Entertainment (SA 6FR)** including the **7" Touch Command Tablet (SA 6U9)** is also an important part of the package.

G12 Rear Seat Entertainment

1. Introduction

The rear passenger compartment operating elements and the rear seat entertainment system are available as follows:

Overview of rear passenger compartment operating elements G12

Index	Explanation
1	**Audio control for rear passenger compartment** (not for US)
2	**7" Touch Command Tablet (SA 6U9)** – The tablet can be used for operation of the convenience as well as the infotainment functions. In addition, it can also be used to surf on the internet when the Wi-Fi hotspot is active. A **snap-in adapter** with charging function for the tablet is installed in the rear center console.
3	**Rear Seat Entertainment Experience (SA6FR)** – With this option, the G12 is equipped with a rear seat entertainment system with two 10" display screens, an RSE control unit and a 7" Touch Command tablet (SA 6U9) including snap-in adapter with charging function.
4	**Electric Reclining Seat and Footrest (SA 4F4) –** The special passenger seat (captain's chair) with additional functions can be controlled via the 7" Touch Command Tablet. **Executive Lounge Rear Center Console (SA 4F5)** – The rear-oriented center console with oddments table and including the optional equipment 7" Touch Command Tablet (SA 6U9). Both options together in one package including the **Rear Seat Entertainment (SA 6FR)** contained in the **Rear Executive Lounge Seating (SA 7GZ).**
5	For items 3 and 4, a **special radio remote control with KLEER® standard** for the rear seat entertainment system is included in addition to the rear compartment displays, the RSE system and the Touch Command. This offers an additional operating option for the customer.

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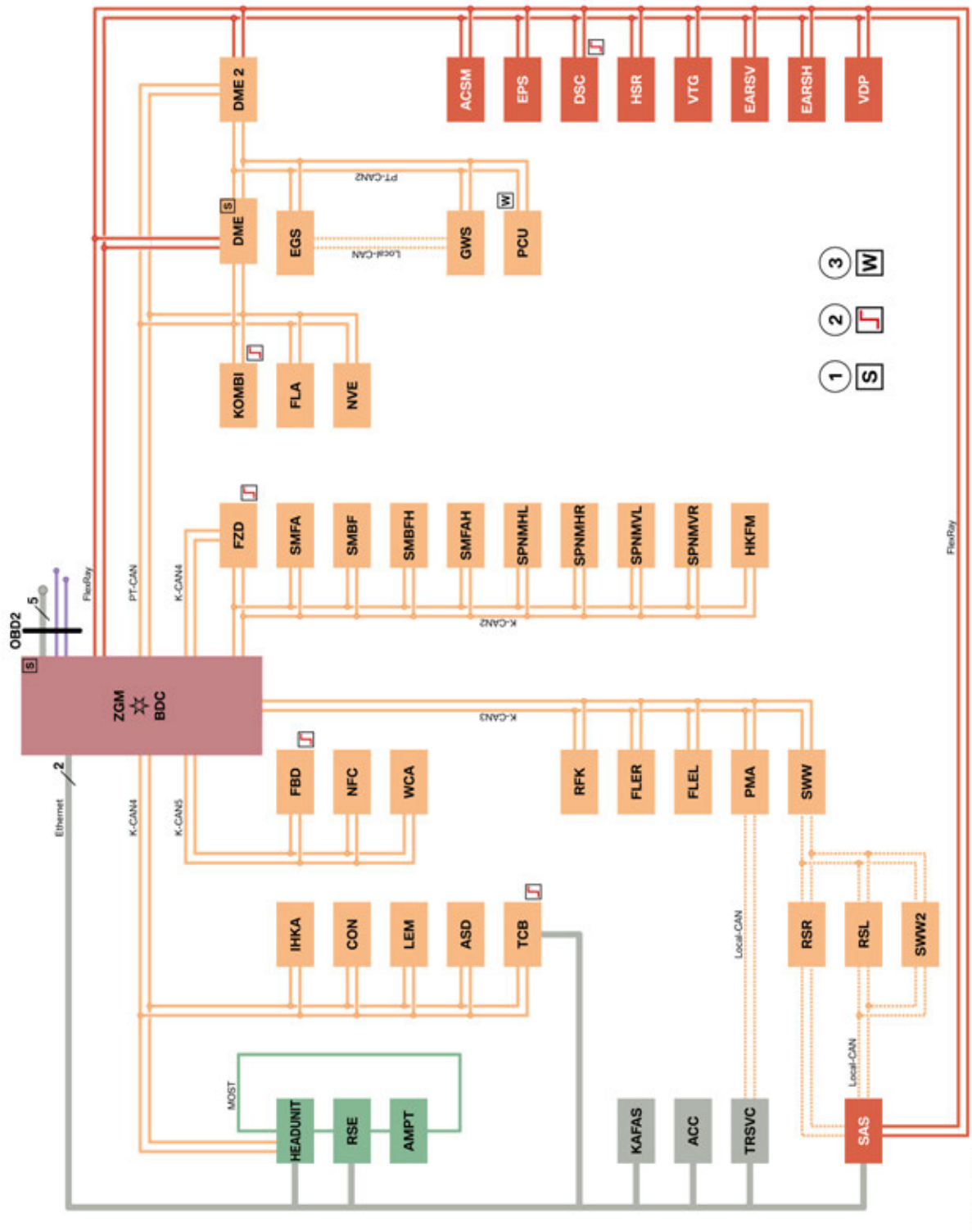
2. System Overview

2.1. G12 bus overview



Bus overview G12

G12 Rear Seat Entertainment

2. System Overview

Abbreviation	Explanation
ACC	Active cruise control
ACSM	Crash Safety Module
AMPT	Amplifier Top (top high fidelity amplifier)
ASD	Active Sound Design
BDC	Body Domain Controller
CON	Controller
DME	Digital Motor Electronics
DSC	Dynamic Stability Control
EARSH	Electric active roll stabilization rear
EARSV	Electric active roll stabilization front
EGS	Electronic transmission control
EPS	Electromechanical Power Steering
FLA	High-beam assistant
FLER	Frontal Light Electronics Right
FLEL	Frontal Light Electronics Left
FZD	Roof function center
GWS	Gear selector
HEADUNIT	Head Unit High 2
HKA	Automatic rear air-conditioning and heating
HKFM	Tailgate function module
HSR	Rear axle slip angle control
IHKA	Integrated automatic heating / air conditioning
KAFAS	Camera-based driver support systems
KOMBI	Instrument panel
LEM	Light Effect Manager
NFC	Near Field Communication
NVE	Night Vision Electronics
PCU	Power Control Unit
PMA	Parking maneuvering assistant
RFK	Reversing camera
RSE	Rear Seat Entertainment
RSL	Radar Sensor Left (avoidance assistant)
RSR	Radar Sensor Right (avoidance assistant)
SAS	Optional equipment system
SCR	Selective Catalytic Reduction

G12 Rear Seat Entertainment

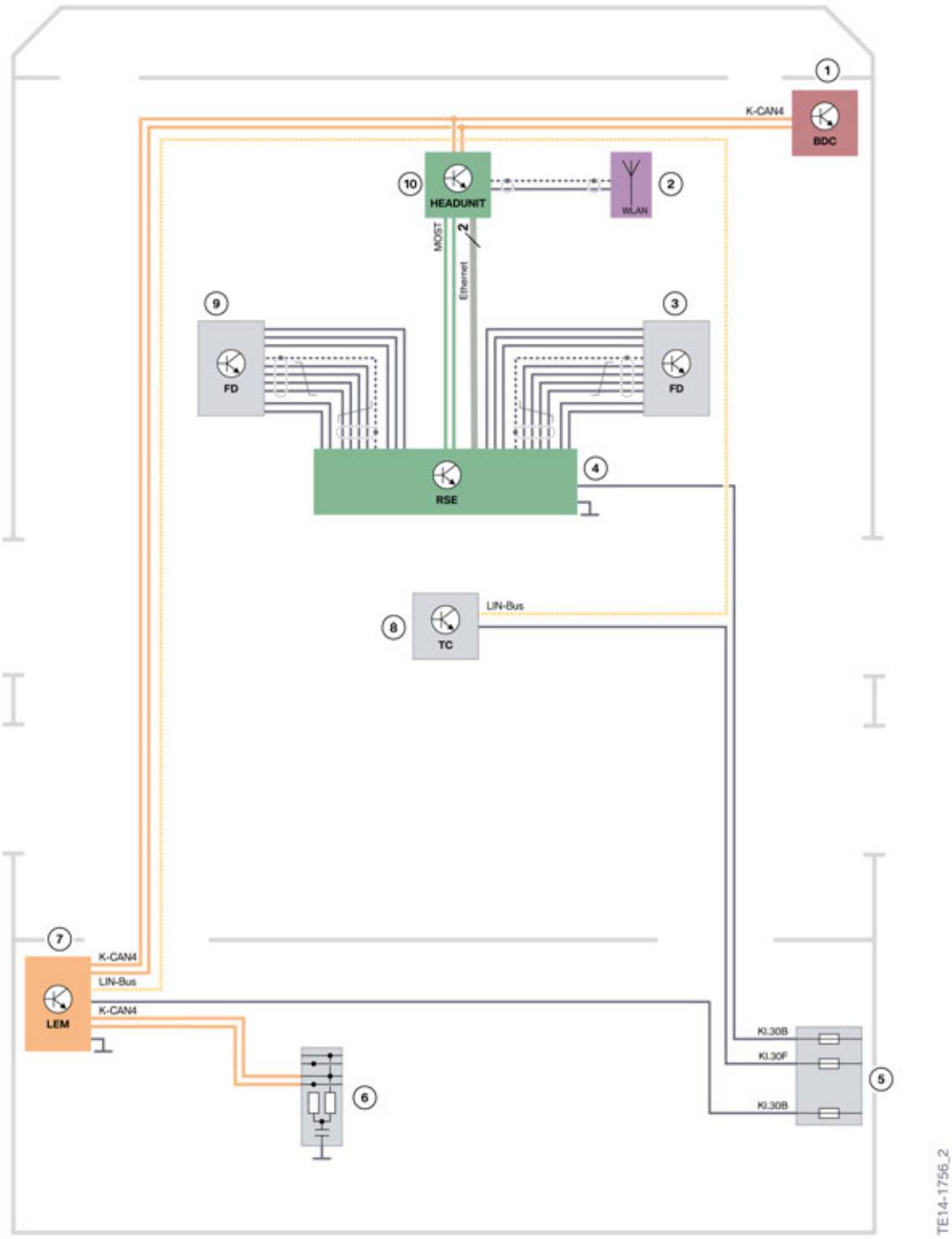
2. System Overview

Abbreviation	Explanation
SMBF	Seat module, passenger
SMFA	Seat module, driver
SMFAH	Seat module, driver, rear
SPNMHL	Seat pneumatics module back left
SPNMHR	Seat pneumatics module back right
SPNMVL	Seat pneumatics module front left
SPNMVR	Seat pneumatics module front right
SWW	Lane change warning (primary)
SWW2	Lane change warning (secondary)
TCB2	Telematic control unit 2
TRSVC	Control unit for rear view camera and SideView
VDP	Vertical Dynamic Platform
VTG	Transfer box
WCA	Wireless Charging tray
1	Start-up node control units for starting and synchronizing the FlexRay bus system
2	Control units with wake-up authorisation
3	Control units also connected at terminal 15WUP

G12 Rear Seat Entertainment

2. System Overview

2.2. Wiring diagram RSE



Wiring diagram RSE G12

G12 Rear Seat Entertainment

2. System Overview

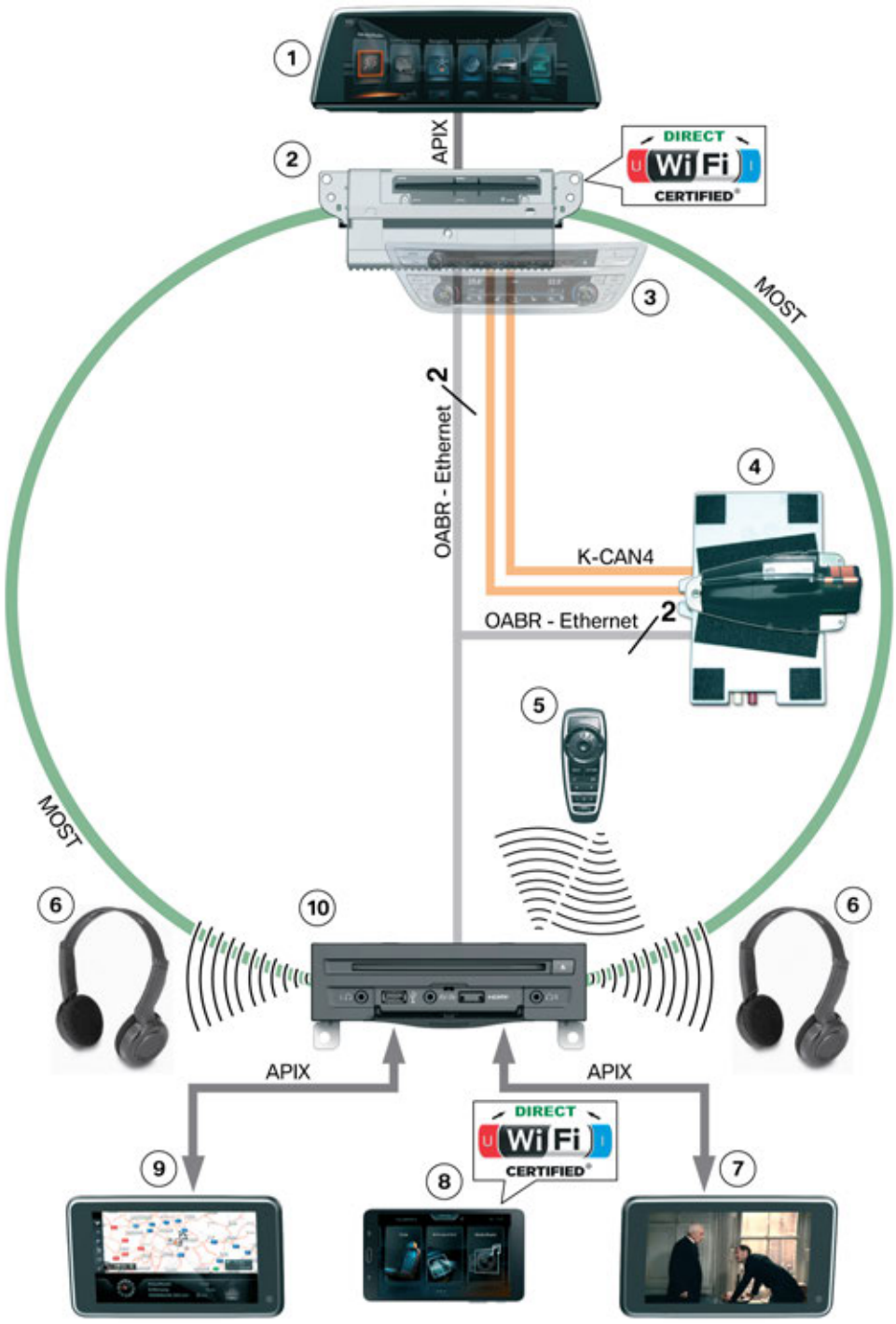
Index	Explanation
1	Body Domain Controller (BDC)
2	Wi®Fi-Direct antenna on the head unit
3	Rear compartment display (FD), rear right
4	RSE control unit (rear seat entertainment)
5	Power distribution box, rear
6	CAN terminator
7	Light Effect Manager (LEM)
8	Snap-in adapter Touch Command with LIM bus connection to the LEM
9	Rear compartment display FD, rear left
10	Head Unit High 2

G12 Rear Seat Entertainment

2. System Overview

2.3. Function profile of rear seat entertainment system

The integration of the individual rear seat entertainment components in the vehicle electrical system of the G12 is shown below.



RSE integration in the vehicle electrical system of the G12

G12 Rear Seat Entertainment

2. System Overview

Index	Explanation
1	Central information display (CID)
2	Head Unit High 2 (HU-H2)
3	Audio control panel in center stack
4	Telematic Communication Box 2 TCB2 + roof fin with the telephone and telematic antennas
5	Rear seat remote control KLEER®
6	Wireless headphones with wireless transmission based on the KLEER® standard connected to the receiver in the RSE control unit
7	Rear compartment display FD, right
8	Touch Command (TC)
9	Rear compartment display (FD), left
10	Rear seat entertainment control unit (RSE)

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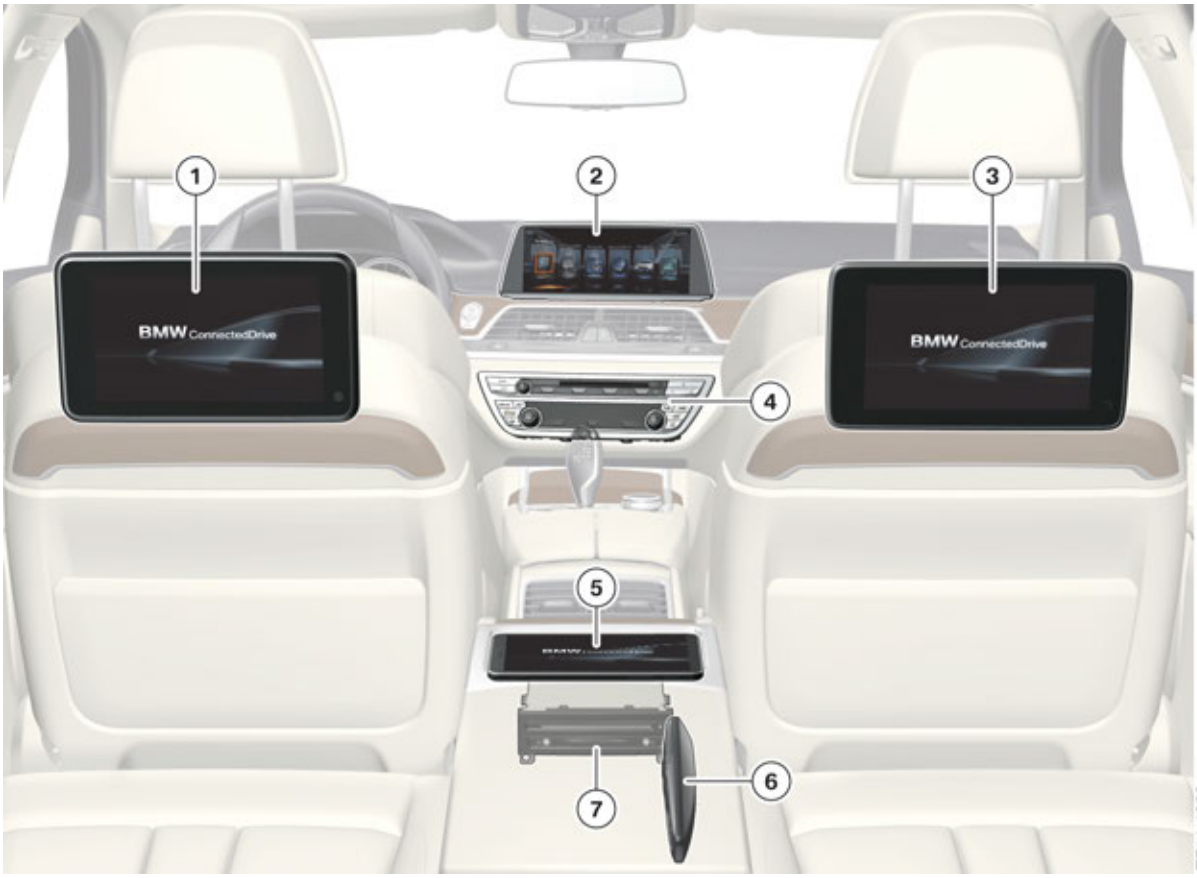
3. Rear Seat Entertainment System

3.1. Components

3.1.1. RSE control unit

Like in the predecessor systems, the heart of the RSE system is the RSE control unit.

In the simpler equipment specification, i.e. the Rear Seat Entertainment (SA 6FR) **without** any additional Lounge optional equipment, the RSE control unit is installed under the heating control panel for the rear passenger compartment. The front trim panel of the RSE control unit faces towards the rear passenger compartment.



Components of the rear seat entertainment system

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3. Rear Seat Entertainment System

Index	Explanation
1	Rear compartment display 10”, rear left
2	Central information display CID, front
3	Rear compartment display 10”, rear right
4	Center stack, front center, with audio control panel and Head Unit High 2 installed behind
5	Touch Command tablet
6	KLEER® radio remote control, rear
7	**RSE control unit**

The RSE control unit is installed below the center console in the rear passenger compartment of the G12 for the optional equipment **Rear Seat Entertainment (SA 6FR)** in combination with **Electric Reclining Seat and Footrest (SA 4F4)** or the SA package **Rear Executive Lounge Seating (SA 7GZ).** The front trim panel of the RSE control unit then faces towards the front of the vehicle.

RSE control unit in combination with Lounge equipment
Installation location of RSE control unit

The RSE control unit, the head unit for the rear seat entertainment system, features an HDMI/MHL connection for external sources (games consoles, Apple® TV etc.) for the first time in the G12.
A USB interface for audio and video playback is also provided. Therefore it support a wire-based transmission of audio/videos from mobile devices to RSE displays (with the use of the correct cable).
As an analogue input, a jack socket for audio/video is now integrated instead of the previous (yellow, white and red) Cinch input.

The RSE control unit in the G12 is a completely new development and is characterized by the following technical data:

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3. Rear Seat Entertainment System

Hardware	Description
Equipment	
MAIN CPU	TI OMAP5@1.5GHz (2x Cortex A15)
CPU RAM (working memory)	4 GB
Flash memory	8 GB
Network/ Audio CPU (sound card)	Jacinto5@720MHz
GPU (graphics card)	SGX544 MP2RC3
GPU (graphic RAM)	UMA (shared VRAM)
Periphery	OMAP5 SOC + Companion ASIC
System communication	Point2Point Links
Drive	Blu-Ray® drive
Interfaces	
OABR Ethernet connection	1 x input/output at the separate OABR connection at the rear
CVBS input	2 x CVBS inputs at the main connector at the rear
Wired headphones	2 x analogue via jack plug
Wireless headphones	2 x KLEER® 2.4 GHz digital
Display connection	2 x APIX 2 with support for max. 1280 x 720 pixels (HU-H RSE had 800 x 600)
Standard Ethernet connection	Is no longer used (no port available)
Digital video input	HDMI/MHL
Analogue video input	Jack plug for analogue audio and video
USB	USB 2.0
Max. USB charge current	2,1 A6

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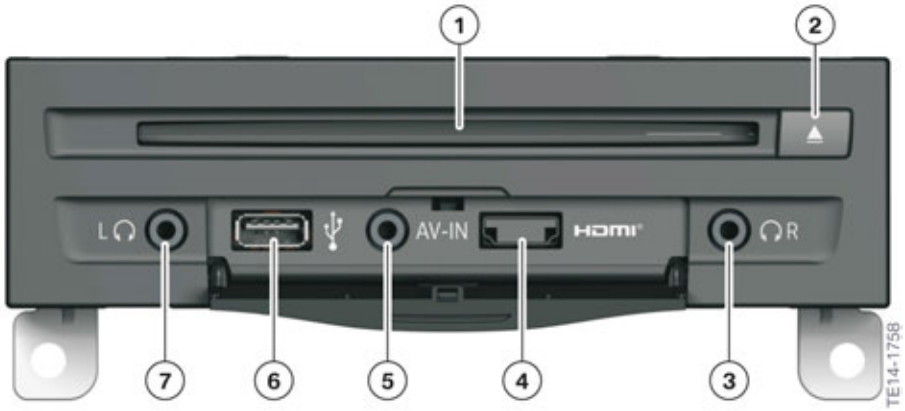
3. Rear Seat Entertainment System

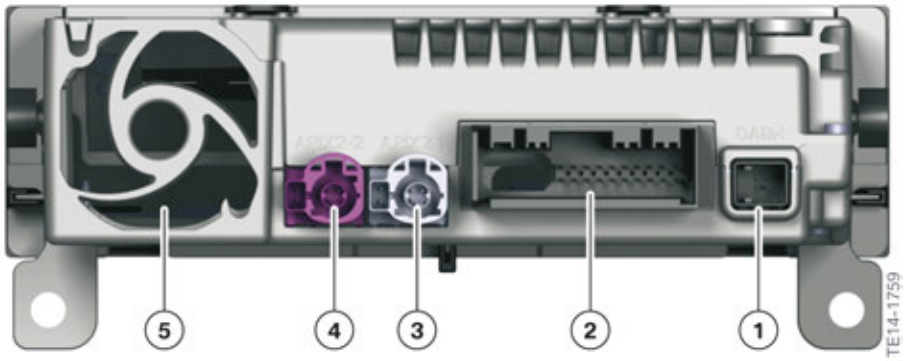
3.1.2. Front view of RSE control unit



Front view RSE G12

Index	Explanation
1	Blu-Ray® drive
2	Eject button
3	Jack socket for headphones, right
4	HDMI/MHL socket
5	AV-IN socket (audio/video) for jack plug
6	USB port (USB 3.0)
7	Jack socket for headphones, left

3.1.3. Rear view of RSE control unit



Rear view RSE G12

Index	Explanation
1	OABR Ethernet interface
2	20-pin main connector and MOST bus interface
3	Rear compartment display FD2 (left side)
4	Rear compartment display FD (right side)
5	Fan

3.1.4. Rear compartment displays

Completely new LC monitors in new designs and with new features were developed for the rear compartment display FD of the rear seat entertainment system in the G12. The two LC monitors are free-standing displays each with a screen sized of 10” and a resolution of 1280 x 720 pixels. Like the central information display CID in the front of the G12, the rear compartment display is now also connected directly to the RSE control unit via **APIX 2** .

The monitors have a separate ON/OFF button on the monitor.

The rear compartment displays do not have touch capability like the CID in the front.

Rear compartment display front and rear views

Index	Explanation
1	Main connector for rear compartment display voltage supply and APIX bus connection to the RSE control unit
2	APIX connection of the rear compartment display

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3. Rear Seat Entertainment System

3.1.5. Wireless headphones (KLEER®)

Wireless transmission for headphones

Whereas transmission of the audio signals in the RSE in the F01/F02 with CIC was still based on infrared technology, wireless transmission is used in the G12, as has already been the case since 07/12 with the HU-H with wireless transmission based on the KLEER® protocol, high-end wireless transmission in the 2-4 GHz range has been chosen which supports 14 channels. In contrast to conventional Bluetooth protocols, the KLEER® protocol ensures uncompressed and thus loss-free sound reproduction in the headphones. The voltage is supplied via three standard commercially available AAA batteries.

Setting options on wireless headphones

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3. Rear Seat Entertainment System

Index	Explanation
1	ON/OFF button with LED for ON/OFF and activation of connection setup
2	Channel selection; it is possible to change between left or right rear compartment displays at the push of a button
3	Knurled wheel for volume setting

The wireless headphones can be connected with the vehicle by a wireless connection based on the KLEER® standard. The customer can find this function under the menu "My Vehicle" in the submenu "System settings – Headphones/Remote control".

Pairing new headphones

Index	Explanation
1	Main menu "My vehicle"
2	Submenu "System settings" – Headphones

It is possible to connect a new pair of headphones here after switching on the headphones and pressing iDrive controller at the entry "Add new device".

Connection mode must now be activated **on the headphones**. This is done by pressing and holding the ON button until the LED on the headphones flashes rapidly.

After connection setup, the user is asked whether he wishes to connect the headphones with the right or left display of the rear seat entertainment system.

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3. Rear Seat Entertainment System

3.1.6. KLEER® remote control

The KLEER® remote control supplied in the vehicle together with the rear seat entertainment system has the following technical data:

Designation	Rear seat remote control KLEER®
Versions/frequencies	2.4 GHz
Series	F15, F16, G11, G12
Available with the optional equipment	Rear Seat Entertainment Experience (SA 6NH) and Executive Lounge (SA 7GZ)

Connection setup for the radio remote control takes place analogously to connection setup for the wireless headphones:

Pairing a rear passenger compartment remote control

Index	Explanation
1	Main menu "My vehicle"
2	Submenu "System settings" – Remote control

After selection of the submenu Remote control, a list with already connected devices is displayed. Now press and hold the "MENU" button and the confirmation button (center button in the selector wheel) **on the rear passenger compartment remote control** for 5 s. Two LEDs on the remote control now flash for 10 s.

As the next step, select "Connect new device" in the vehicle and confirm. The pairing function is activated and the remote control connected.

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3. Rear Seat Entertainment System

3.2. BMW Touch Command Tablet

3.2.1. Overview

In the latest-generation RSE system, the rear passenger compartment controller FCON is replaced by a 7” tablet based on the Android® operating system. The customer can use this **BMW Touch Command Tablet** (SA 6U9), or Touch Command for short, to control convenience functions, for operation of the rear seat entertainment system as a replacement for the rear passenger compartment controller as well as for control of the various entertainment and infotainment sources.

Touch Command tablet in the rear passenger compartment of the G12

In addition, the Touch Command can also leave the BMW interface and be operated as a standard Android® device. Surfing on the internet is then possible both via the hotspot integrated in the vehicle as well as outside the vehicle in the area covered by an external hotspot.

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3. Rear Seat Entertainment System

Touch Command functions in the G12

Index	Explanation
COMFORT	
1	Convenience function: massage seats and fitness programs
2	Convenience function: roller sunblinds
3	Convenience function: operation of heating and air conditioning system in rear passenger compartment
4	Convenience function: ambient lighting
ENTERTAINMENT	
5	Remote function: remote control/operation of infotainment sources
APPS	
6	Switching from the BMW user interface to a standard Android environment
TOUCHPAD	
7	In the G12, the rear seat entertainment system is operated with a touchpad on the Touch Command tablet instead of with the rear passenger compartment controller.

You can find details on operation of the Touch Command tablet in the “G12 Displays and Controls” training manual.

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3. Rear Seat Entertainment System

3.2.2. Touch Command connection

Vehicle Wi-Fi (Wi-Fi®Direct)

The Touch Command is connected to the vehicle via WLAN in two ways. Via the **Vehicle Wi-Fi (Wi-Fi®Direct)** and, if present, via the **Internet Hotspot** in connection with the standard equipment Wi-Fi Hotspot (SA 6WD).

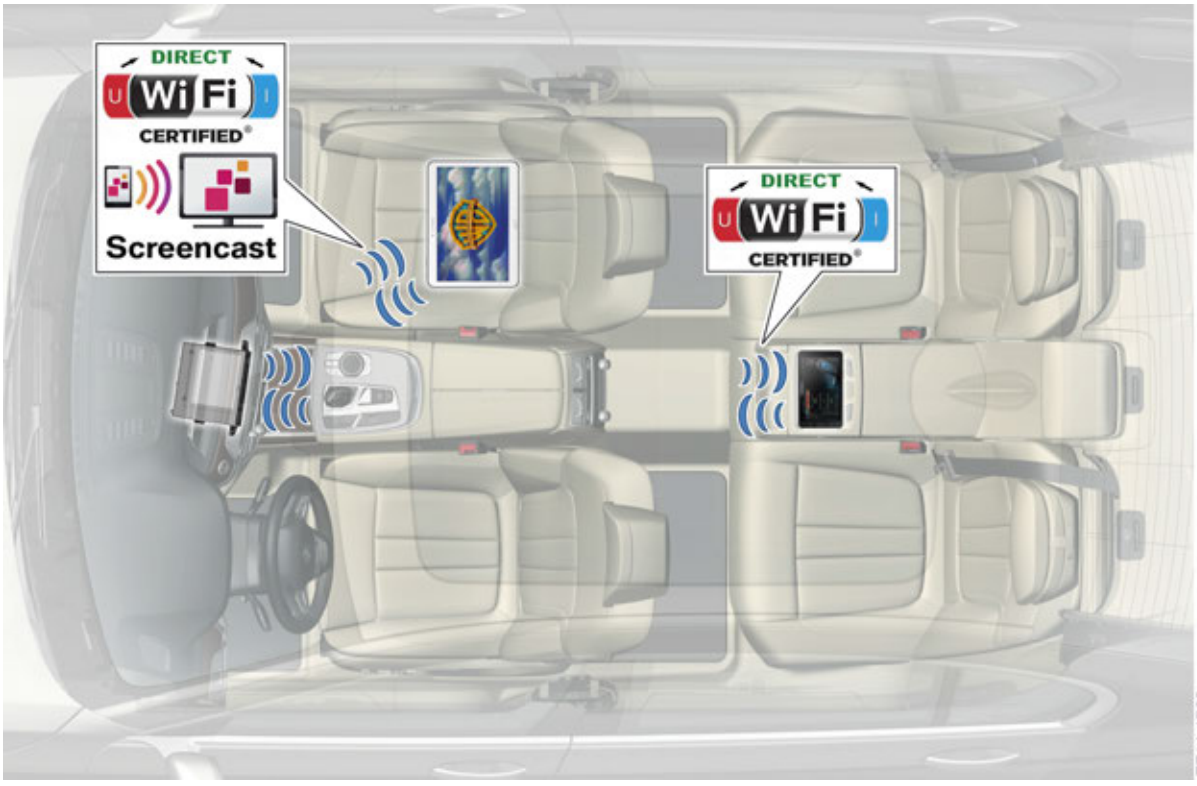
The Touch Command is integrated in the vehicle Wi-Fi for control and monitoring functions.
The **Vehicle Wi-Fi** is a certified standard of the Wi-Fi®Alliance which is called **Wi-Fi®Direct**.

http://www.wi-fi.org

Wi-Fi®Direct is a standard for data transmission between two WLAN end devices without central Access Point. It is based on the international standard IEEE 802.11 (ISO/IEC 8802-11), which describes the properties of a wireless network.

In the G12, this data transmission always takes place by means of Wi-Fi®Direct between the head unit (with connected WLAN antenna) and the following end devices:

- Between head unit and smartphone for the “Screencast” function (see “G12 Telephone and telematic systems” training manual).
- Between head unit and Touch Command for the control and monitoring functions via tablet PC.



Wi-Fi®Direct (Vehicle Wi-Fi) streaming sources in the G12

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3. Rear Seat Entertainment System

3.3. Wi-Fi Hotspot

3.3.1. Wi-Fi Hotspot

Wi-Fi Hotspot

The Wi-Fi Hotspot (SA 6WD) is included (as a 100% option) on US market vehicles. **It is used by customer access to the internet (world wide web) from their phone while in the vehicle**. The term "Wi-Fi" is commonly used instead of WLAN. That is why the term Wi-Fi with the corresponding logo is often used in combination with the WLAN hotspot.

Wi-Fi® symbol

The hotspot is a multi-point connection similar to a home network. The hotspot performs the task of a "hub", as familiar from network technology. The customer can connect up to 10 devices to the hotspot (hub) and surf on the internet with a maximum download speed of up to 100 Mbit/s. A "Client to Client" connection is not possible. In other words, the devices cannot communicate with each other. In network terms, this means that the "hub" does not have a "bridge" function.

The hotspot function can be used by the customer in combination with an existing or additional mobile data plan. The hardware in the vehicle for the hotspot is coupled to the optional equipment **wireless charging (SA 6NW)** which includes convenient telephone (SA 6NS).

The hotspot function can be used by the customer in combination with an existing or additional cell data plan. The customer must **independently** extend the data plan with the provider in the Europe and US versions. The procedure is similar to that for booking hotspot access in a hotel or a public hotspot in a café. After the data connection is set up between the end device (smartphone, tablet PC, etc.) and the hotspot, a provider page will be displayed where the customer can independently extend the data contract.

If the booking is successful, a connection will be set up to the free, unfiltered internet via the MIMO-LTE data connection in the TCB2. TEL1 and TEL2 in the roof antenna/roof fin are defined as telematic antennas for reception. Information on this is provided in the information bulletin "G12 Telephone and telematics".

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3. Rear Seat Entertainment System

Data graphic of hotspot in the G12

The **hotspot** allows the customer free access to the internet for his smart devices (smartphones, tablets, PC, etc.) and also permits internet access with the Touch Command table available for the Rear Seat Entertainment.

For the first time at BMW, the emergency antenna (BACKUP or ECALL antenna) integrated in the TCB2 is used as the hotspot antenna for the hotspot in the entire vehicle interior.

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Hotspot in the G12

The driver's position was intentionally not shown here as a Wi-Fi reception position. **When the vehicle is stationary**, the driver can of course also access the hotspot via a mobile end device (cell phone, tablet).

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3. Rear Seat Entertainment System

3.4. Functions

3.4.1. Overview

The functions for rear seat entertainment are structured in a similar way to the main menu of the head unit and CID in the front area of the vehicle.

Display on the rear passenger compartment display of the rear seat entertainment system in the G12

G12 Rear Seat Entertainment

3. Rear Seat Entertainment System

Index	Explanation
1	ConnectedDrive browser function in the rear seat entertainment system (internet)
2	Navigation map display in the rear seat entertainment system in the G12
3	Overview of main menu for rear seat entertainment in the G12; main menu selection Communication
4	Music source "Guns N' Roses", playback in rear seat entertainment system; selection "HDMI Rear" from the favorites menu in the rear seat entertainment system

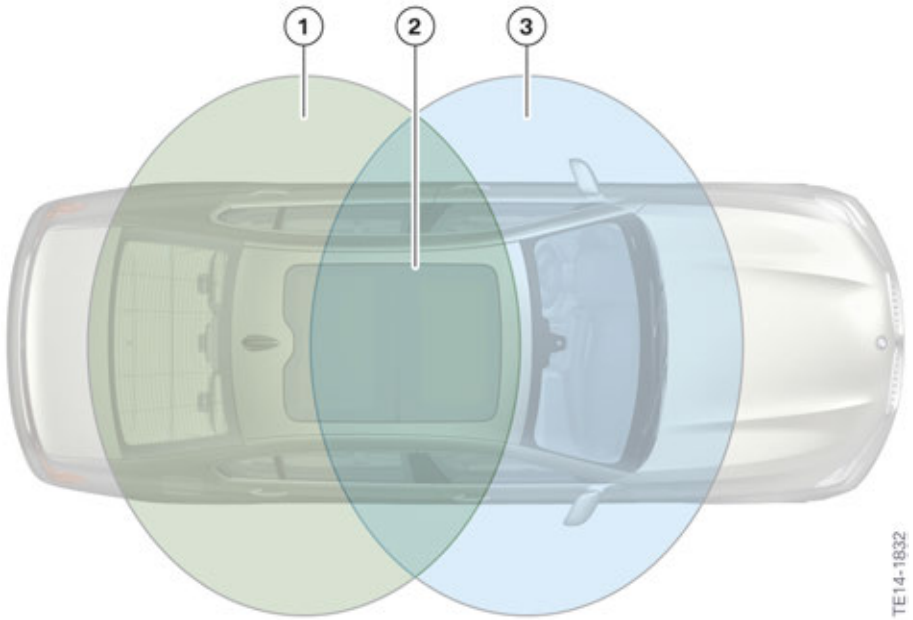
3.4.2. Zoning

To simplify operation of entertainment devices in the driving area and rear area of the passenger compartment for the customer, a **simple control concept was defined for media operation** through "zoning".

Media that are inserted, plugged in or streamed to the head unit at the front, in the driving area or head unit area of the vehicle, can be operated and played back at the front by means of the controller or CID on the Head Unit High 2.

There is also a zone whose sources can be accessed jointly at the front and rear of the vehicle.

Media that are inserted or plugged into the RSE control unit in the rear passenger compartment can be operated and played only via the Touch Command or KLEER® remote control.



Zoning concept of the G12

G12 Rear Seat Entertainment

3. Rear Seat Entertainment System

Index	Explanation
1	**RSE zone (rear of vehicle):** Blu-Ray® drive in the RSE control unit, MHL +HDMI external devices, USB interface in the RSE control unit, AUX-In + AV-In in the RSE control unit
2	**Combined zone:** Broadcast media such as Radio, Entertainment Server (music collection), browser (with available ConnectedDrive service Internet (SA 6AR), integrated operating instructions IBA, Screencast via Wi-Fi®Direct
3	**Head unit zone (front of vehicle):** Head unit DVD drive, head unit USB interface(s), wireless (wireless sources such as Bluetooth audio streaming, apps, etc.); Online Entertainment

G12 Rear Seat Entertainment

3. Rear Seat Entertainment System

3.4.3. Connections

The following illustrations are intended to briefly show the difference between pairing devices by means of Vehicle Wi-Fi (Wi-Fi®Direct) and connecting devices by means of the hotspot.

Connection setup in the G12

Index	Explanation
1	Settings menu and activation menu for external sources
2	**Activation of Vehicle Wi-Fi (Wi-Fi®Direct)**
2a	Activation in the vehicle
2b	Selection of a connection to a Touch Command tablet
2c	Search on the tablet for the Wi-Fi connection in the vehicle with the respective VIN identification
3	**Activation of the hotspot in the vehicle**

Index	Explanation
3a	Activation in the vehicle
3b	Selection to transmit a hotspot ID
3c	Display of hotspot name and hotspot key in the vehicle
3d	Connection at external device to the vehicle hotspot

3.4.4. Rear passenger compartment enabling

The selection is made in the main menu "My Vehicle" in the submenu "System settings" – "Rear-seat entertainment".

Rear passenger compartment enabling

Index	Explanation
1	Main menu "My vehicle"
2	Submenu "System settings"– Rear-seat entertainment

The following are available for selection:

Limited (only Media/Radio)
If the same entertainment source is selected at the front and rear, no further settings can be made for this source. For example, if the radio is playing at the front and rear, the station can be changed only at the front. The entertainment source selected at the front is output via the speakers. The entertainment source selected at the rear can be output only via headphones. Only the following function can be accessed at the rear in this setting: "Media/Radio"
Enable rear-seat control

If the same entertainment source is selected at the front and rear, settings can be made for this source at both front and rear.
Rear seat entertainment off
Rear seat entertainment is switched off and can no longer be activated from the rear passenger compartment.
Volume limitation
Volume limitation can be activated from the front for the rear passenger compartment.

Serving function

In addition, the driver/front passenger can also "serve" a function to the rear seat entertainment system. One or both rear compartment displays are then selected under the main menu "Media/ Radio" in the submenu "Rear". Only entertainment sources are available for the "serving" function.

Language settings

A special feature applies when the vehicle language is changed. If the vehicle language is changed, the Touch Command connected via Wi-Fi®Direct is also rebooted and the Touch Command tablet starts in the changed language variant of the vehicle.

Changing the language version in the Android® application of the operating system of the Touch Command tablet (apps installed on the Touch Command tablet) does not influence the set vehicle language of the tablet.

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4. Touch Command Update

4.1. Background

The Touch Command Tablet is downwardly compatible and can therefore communicate with all vehicle electrical system versions and integration levels that support a Touch Command. This communication basis is lost, however, if the vehicle electrical system is programmed to a higher integration level by the BMW programming system. The Touch Command Tablet must then also be programmed. It is updated via a special program, the **Touch Command Service Updater (TCSU)**. This is distributed to the shared storage of the BMW service workshop via an online update. A current driver program for Android® tablets from SAMSUNG® is made available together with the TSCU.

Among other things, the cached navigation map data is also stored on this shared storage, a small, autonomous NAS server. Programming via the BMW programming system (ISTA/P or ISTA Next) is not planned.

4.2. Update process

The Touch Command tablet is switched to download mode by means of a key combination described in the **TCSU** manual. The Touch Command is then connected with the PC or laptop on which **TCSU.exe** is located. In the next step TCSU.exe is launched on the laptop. The update program Touch Command Service Updater runs separately here as **TCSU.exe** without installing itself in the operating system when executed.

If the tablet is not shown as added, this may be due to too many apps being active. Please close all apps on the Touch Command and restart the process. The same applies to the Windows PC if too many programs are being run here simultaneously.

The package is offered in WUSS for BMW branches that require the admin rights for installation of the driver!

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4. Touch Command Update

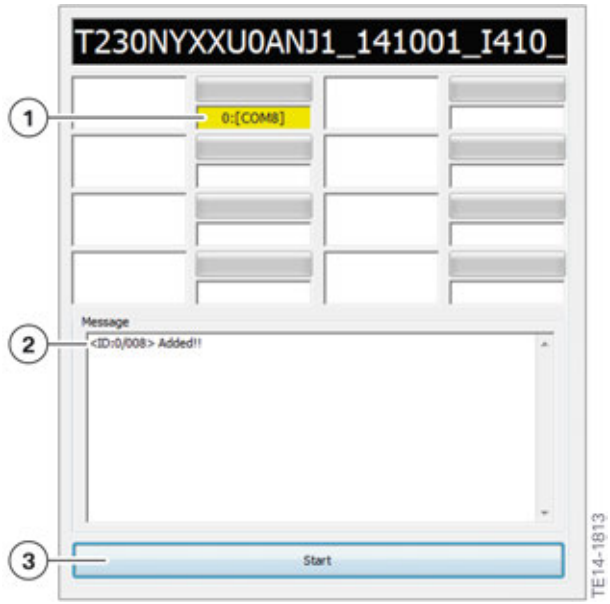
Update process via the TCSU

Index	Explanation
1	Android tablet “Touch Command” in download mode
2	USB connection with original cable for from the BMW range “Parts and Accessories” (EPC: 61 12 2 336 423)
3	Application TCSU.exe run on workshop PC or laptop or on ISSS Next

A successfully connected Touch Command that has been recognized by the system is added both in the grid as a yellow-marked device (e.g. COM8) and in the message window.

G12 Rear Seat Entertainment

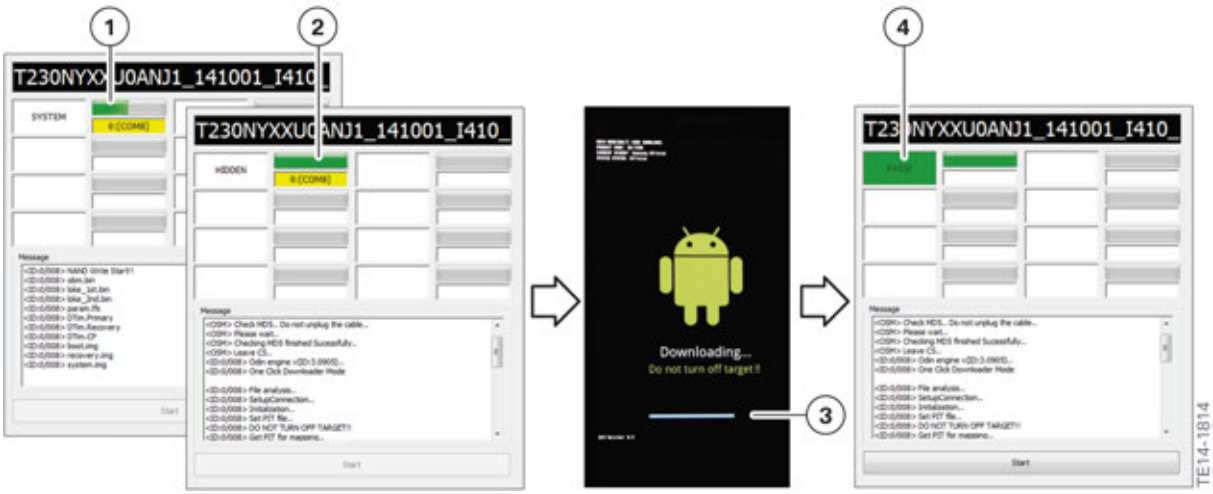
4. Touch Command Update



Executed TCSU.exe application

Index	Explanation
1	Android® device was detected, visible by display of the yellow window
2	Message window with the information that an Android device has been successfully found: “ID XXX Added!”
3	Start button

Download to the Android Touch Command device starts after pressing the Start button. The download is accompanied by a green progress bar. The individual steps are shown below:



Update process

G12 Rear Seat Entertainment
4. Touch Command Update

Index	Explanation
1	Start update process
2	Update process leads to restart on the Android tablet “Touch Command”
3	Touch Command restarts
4	The message “PASS!” is displayed after a successful Touch Command restart and a last check. The update was successful and the Touch Command device can be removed.

4.3. When is an update necessary?

An update of the Touch Command tablet must be performed in the following cases:

1 Entered fault code and corresponding instruction from the BMW diagnosis system.

2 After programming the vehicle to a new integration level if the fault "Vehicle compatibility problem" is entered in diagnosis.

3 In the event of a customer complaint.

4 As necessary in the event of available security updates.

4.4. Handbook

A detailed description of programming the Touch Command tablet is provided in the handbook. Since it had not yet been decided at the time of editorial closing where the handbook will be available for download for the dealer organization.

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